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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/740,660	12/18/2000	Ganapati R. Mauze	10004415-1	3498

7590 05/19/2003

AGILENT TECHNOLOGIES
Legal Department, 51U-PD
Intellectual Property Administration
P. O. Box 58043
Santa Clara, CA 95052-8043

EXAMINER

CEPERLEY, MARY

ART UNIT	PAPER NUMBER
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1641

DATE MAILED: 05/19/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

09/740,660

Applicant(s)

MAUZE ET AL.

Examiner

Mary (Molly) E. Ceperley

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-- The MAILING DATE of this communication appears on the cov r sheet with the correspond nce address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,8,10,11,13-21 and 23-49 is/are pending in the application.

4a) Of the above claim(s) 28-31 is/are withdrawn from consideration.

- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5,8,10,11,14-21,23-27,32-49 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Pri rity under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

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1) The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2) Although specific claims are cited in the rejections below, these rejections are also applicable to all other claims in which the noted problems/language occur.

3) Claims 1-5, 8, 10, 11, 14-21, 23-27, and 32-49 are rejected under 35 U.S.C. 112, first paragraph, as not corresponding to the enabling written description of the invention as it is set forth in the specification and as containing new matter.

a) Paragraph (b) of claim 1 is inconsistent with the description of the invention as it is set forth at page four, lines 8-9 of the specification wherein it is stated that the term "surface coating refers to a thin film or layer applied to a matrix material". Examples 1 and 2 of the specification describe this configuration of a "matrix" having a "surface coating" and page 4, lines 22-32 describe a "donor" "sequestered or absorbed on a surface". See also page 6, line 17 wherein the "surface coating 2 must be capable of acting as a donor". There is no description of nor enablement for the "surface coating" being "adsorbed within, or covalently attached to the surface of said matrix".

b) It is noted that page 4 of the specification contains descriptions of the invention which are inconsistent:

Page 4, lines 8-10 and line 17 wherein the "surface coating" contains "energy acceptors" is inconsistent with page 6, line 18 wherein the "surface coating 2 must be capable of acting as a donor".

Page 4, lines 8-13 which seems to indicate that no "surface coating" is required (see lines 10-13); this is inconsistent with the working examples, original claim 1, and the description of the invention in the SUMMARY OF THE INVENTION.

c) There is no written description in the specification to support the claim limitation of paragraph

© "wherein upon irradiation said fluorescent donor molecule emits fluorescence that is at least partially

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transmitted through said surface coating". Page 4, lines 27-29 provides the following description which relates only to the transmission by the donor through the protection layer.

"Thus, the donor molecule is trapped in a composite structure (referred to as a donor particle). The donor can be excited by appropriate radiation transmitted through the transparent barrier layer. Moreover, the transparent barrier allows fluorescence emission from the donor to radiate through it."

5) **d)** There is no description in the specification of nor enabling support for the Markush group of "fluorescent donor molecules" recited in claim 36.

4) Claims 1-5, 8, 10, 11, 14-21, 23-27, and 32-49 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a) Paragraph (b) of claim 1 is confusing and indefinite in the use of the term "said surface coating *includes* a fluorescent donor molecule *that* is absorbed on, absorbed within, or covalently attached to the surface of said matrix". First, it is unclear if the term "that" refers to the "surface coating" or to the "fluorescent donor molecule". Second, this term includes the case wherein the "surface coating" is "absorbed within...the surface of the matrix"; this configuration is inconsistent with the conventional usage of the term "coating" which necessarily implies that the "coating" is on top of the "surface". Third, the term "includes" is indefinite. It is unclear what the term "includes" implies, i.e. whether other components are required to be present in the "surface coating" and/or if this term is inclusive of the case in which the "surface coating" consists solely of "fluorescent donor molecules".

b) In claim 1 it is unclear what is meant by the term "fluorescent donor molecule" given the fact that no "fluorescent acceptor molecule" is required as a component of the "encapsulation vesicle". Whether a molecule functions as a "donor" or "acceptor" depends on how it is used.

5) Claims 1, 4, 5, 8, 21, 32-35, and 47 are rejected under 35 U.S.C. 102(b) as being anticipated by Hainfeld et al (U.S. 5,521,289).

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A description of the Hainfeld et al patent appears in paragraph **8)** of the December 26, 2002 Office action.

Claim 1 of the instant application, very broadly written, includes the composition of Hainfeld et al.

The instant claim 1 "encapsulation vesicle" requires as components a **a)** "matrix", a **b)** "surface coating" which is "absorbed on, *absorbed within*, or covalently attached to the surface of said matrix", and a **c)** "protection layer". This combination/configuration corresponds to the "combined (bifunctional) fluorescent and metal particle probes" of Hainfeld et al (col. 8, line 4 *et seq*) which have a polymer coating (col. 7, lines 51-54). The metal/phenanthroline/fluorescent molecule complex of col. 8 of the reference $(M_n(OrF)_m(OrT)_l(Or'')_p)$, for example, corresponds to the combination of **a)** and **b)** of instant claim 1, the metal core "M" of the reference being the "matrix" and the fluorescent moieties being the "surface coating". The open-ended "comprising" language of instant claim 1 does not exclude the presence of additional, unspecified components in the composition such as additional fluorescent moieties. The "fluorescent *donor* molecule" of instant claim 1 is preferably an "organo-metallic complex" (claim 4) including "phenanthroline" as disclosed at page 7, line 5 of the instant specification and as described by Hainfeld et al (see above). It is noted that whether a molecule is a "*donor*" or "acceptor" depends on its method of use and that instant claim 1 is directed to a *composition* and not a method of use. Thus, the term "donor" can include a wide variety of fluorescent molecules which under different circumstances might be labeled as either "donors" or "acceptors". The "polymer coating" of Hainfeld et al (col. 7, lines 44-47), the same coating as described at page 9, lines 3-7 of the instant specification, inherently has the effect of "reducing collisional quenching of fluorescence". The "for use in" limitations of claim 21, 32-35, and 47 do not limit the actual *composition* of claim 1.

6) Claims 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hainfeld et al (U.S. 5,521,289).

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Hainfeld et al is applied for the reasons stated above. The features of the dependent claims are either specifically or inherently described by the references (e.g. emission wavelengths of known fluorescers {claim 11}) or constitute obvious variations in parameters which are routinely modified in the art (e.g. choice of known fluorescers) and which have not been described as critical to the practice of the invention.

7) Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary E. (Molly) Ceperley whose telephone number is (703) 308-4239. The examiner can normally be reached from 8 a.m. to 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le, can be reached at (703) 305-3399. The fax phone number for responses to be filed BEFORE final rejection is (703) 872-9306. The fax phone number for responses to be filed AFTER final rejection is (703) 872-9307.

Questions which are NOT RELATED TO THE EXAMINATION ON THE MERITS, should be directed to **TC 1600 CUSTOMER SERVICE at (703) 308-0198**. Any inquiry of a general nature or relating to

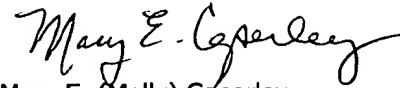
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the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

May 17, 2003

A handwritten signature in black ink, reading "Mary E. Ceperley". The signature is fluid and cursive, with the first name "Mary" and last name "Ceperley" clearly legible.

Mary E. (Molly) Ceperley
Primary Examiner
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